Classified Index
Volume 9 and 10, 1978–1979

Author Index

Adams, V., & McLeod, D. The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
Adi, H. Intellectual development and reversibility of thought in equation solving. 9:204–213, May 1978.
Austin, J. D. High school calculus and first-quarter college calculus grades. *10*:69–72, Jan. 1979.
Babad, E. Y., & Bashi, J. On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
Bana, J., & Nelson, D. Distractors in nonverbal mathematical problems. 9:55–61, Jan. 1978.
Barnett, J. C., & Eastman, P. M. Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
Barnett, J. C., & Eastman, P. M. The use of manipulative materials and student performance in the enactive and iconic modes. 9:94–102, Mar. 1978.
Barr, D. C. A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
Bashi, J., & Babad, E. Y. On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
Becher, R. M. The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
Becker, J. P., & Young, C. D., Jr. The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
Becker, J. P., & Young, C. D., Jr. Designing instructional methods in mathematics to accommodate different patterns of aptitude. 9:4–19, Jan. 1978.
Brett, L. J., Brush, L. R., & Sprotzer, E. R. Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Bright, G. W., Harvey, J. G., & Wheeler, M. M. Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
Bright, G. W., Harvey, J. G., & Wheeler, M. M. Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.
Brooks, S., & Hartz, M. Student placement—a comparison of traditional and computerized branching test administrations. *10*:213–216, May 1979.
Brush, L. R. Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.
Brush, L. R., Brett, L. J., & Sprotzer, E. R. Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Caldwell, J. H., & Goldin, G. A. Variables affecting word problem difficulty in elementary school mathematics. *10*:323–336, Nov. 1979.
Campbell, P.F. Artistic motion cues, number of pictures, and first-grade children's interpretation of mathematics textbook pictures. *10*:148–153, Mar. 1979.
Campbell, P. F. Textbook pictures and first-grade children's perception of mathematical relationships. 9:368–374, Nov. 1978.
Carpenter, T. P., McLeod, D. B., McCornack, R. L., & Skvarcius, R. Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Carpenter, T. P., & Price, G. G. (Review) On further examination: Report of the Advisory Panel on the Scholastic Aptitude Test score decline. 9:155–160, Mar. 1978.
Cifarelli, V. V., & Wheatley, G. H. Critique of the Thornton study. *10*:233–234, May 1979.
Cifarelli, V. V., & Wheatley, G. H. Formal thinking strategies: A prerequisite for learning basic facts? *10*:368–370, Nov. 1979.
Coburn, T. G. Criteria for judging research reports and proposals. 9:75–78, Jan. 1978.
Cooney, T. J. A brief look at NSF's Research in Science Education program. *10*:223–228, May 1979.
Creswell, J. L., & Vaughn, L. R. Hand-held calculator curriculum and mathematical achievement and retention. *10*:364–367, Nov. 1979.
Crosswhite, F. J. (Review) Critical variables in mathematics education: Findings from a survey of the empirical literature. *10*:381–382, Nov. 1979.
Days, H. C., Wheatley, G. H. & Kulm, G. Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
Days, H., & Kulm, G. Information transfer in solving problems. *10*:94–102, Mar. 1979.
Easterday, K. E., & Henry, L. L. The effect of maturation or education on sentential logic. 9:67–69, Jan. 1978.
Eastman, P. M., & Barnett, J. C. Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
Eastman, P. M., & Barnett, J. C. The use of manipulative materials and student performance in the enactive and iconic modes. 9:94–107, Mar. 1978.
Eastman, P. M., & Salhab, M. The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
Edmonds, E. M., & Smith, L. R. Teacher vagueness and pupil participation in mathematics learning. 9:228–232, May 1978.
Fennema, E. H., & Sherman, J. A. Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Flexer, R. J. Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
Frankland, R. L., Wheatley, G. H., Mitchell, R., & Kraft, R. Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
Freidman, M. The manipulative materials strategy: The latest Pied Piper? 9:78–80, Jan. 1978.
Fuson, K. C. (Review) The child's understanding of number. *10*:383–387, Nov. 1979.
Geeslin, W. E., & Shar, A. O. An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
Ginther, J. R. Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
Goldin, G. A., & Caldwell, J. H. Variables affecting word problem difficulty in elementary school mathematics. *10*:323–336, Nov. 1979.
Gullen, G. E. Set comparison tactics and strategies of children in kindergarten, first grade, and second grade. 9:349–360, Nov. 1978.

Classified Index
Volume 9 and 10, 1978–1979

Author Index

Adams, V., & McLeod, D. The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
Adi, H. Intellectual development and reversibility of thought in equation solving. 9:204–213, May 1978.
Austin, J. D. High school calculus and first-quarter college calculus grades. *10*:69–72, Jan. 1979.
Babad, E. Y., & Bashi, J. On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
Bana, J., & Nelson, D. Distractors in nonverbal mathematical problems. 9:55–61, Jan. 1978.
Barnett, J. C., & Eastman, P. M. Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
Barnett, J. C., & Eastman, P. M. The use of manipulative materials and student performance in the enactive and iconic modes. 9:94–102, Mar. 1978.
Barr, D. C. A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
Bashi, J., & Babad, E. Y. On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
Becher, R. M. The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
Becker, J. P., & Young, C. D., Jr. The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
Becker, J. P., & Young, C. D., Jr. Designing instructional methods in mathematics to accommodate different patterns of aptitude. 9:4–19, Jan. 1978.
Brett, L. J., Brush, L. R., & Sprotzer, E. R. Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Bright, G. W., Harvey, J. G., & Wheeler, M. M. Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
Bright, G. W., Harvey, J. G., & Wheeler, M. M. Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.
Brooks, S., & Hartz, M. Student placement—a comparison of traditional and computerized branching test administrations. *10*:213–216, May 1979.
Brush, L. R. Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.
Brush, L. R., Brett, L. J., & Sprotzer, E. R. Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Caldwell, J. H., & Goldin, G. A. Variables affecting word problem difficulty in elementary school mathematics. *10*:323–336, Nov. 1979.
Campbell, P.F. Artistic motion cues, number of pictures, and first-grade children's interpretation of mathematics textbook pictures. *10*:148–153, Mar. 1979.
Campbell, P. F. Textbook pictures and first-grade children's perception of mathematical relationships. 9:368–374, Nov. 1978.
Carpenter, T. P., McLeod, D. B., McCornack, R. L., & Skvarcius, R. Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Carpenter, T. P., & Price, G. G. (Review) On further examination: Report of the Advisory Panel on the Scholastic Aptitude Test score decline. 9:155–160, Mar. 1978.
Cifarelli, V. V., & Wheatley, G. H. Critique of the Thornton study. *10*:233–234, May 1979.
Cifarelli, V. V., & Wheatley, G. H. Formal thinking strategies: A prerequisite for learning basic facts? *10*:368–370, Nov. 1979.
Coburn, T. G. Criteria for judging research reports and proposals. 9:75–78, Jan. 1978.
Cooney, T. J. A brief look at NSF's Research in Science Education program. *10*:223–228, May 1979.
Creswell, J. L., & Vaughn, L. R. Hand-held calculator curriculum and mathematical achievement and retention. *10*:364–367, Nov. 1979.
Crosswhite, F. J. (Review) Critical variables in mathematics education: Findings from a survey of the empirical literature. *10*:381–382, Nov. 1979.
Days, H. C., Wheatley, G. H. & Kulm, G. Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
Days, H., & Kulm, G. Information transfer in solving problems. *10*:94–102, Mar. 1979.
Easterday, K. E., & Henry, L. L. The effect of maturation or education on sentential logic. 9:67–69, Jan. 1978.
Eastman, P. M., & Barnett, J. C. Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
Eastman, P. M., & Barnett, J. C. The use of manipulative materials and student performance in the enactive and iconic modes. 9:94–107, Mar. 1978.
Eastman, P. M., & Salhab, M. The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
Edmonds, E. M., & Smith, L. R. Teacher vagueness and pupil participation in mathematics learning. 9:228–232, May 1978.
Fennema, E. H., & Sherman, J. A. Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Flexer, R. J. Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
Frankland, R. L., Wheatley, G. H., Mitchell, R., & Kraft, R. Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
Freidman, M. The manipulative materials strategy: The latest Pied Piper? 9:78–80, Jan. 1978.
Fuson, K. C. (Review) The child's understanding of number. *10*:383–387, Nov. 1979.
Geeslin, W. E., & Shar, A. O. An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
Ginther, J. R. Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
Goldin, G. A., & Caldwell, J. H. Variables affecting word problem difficulty in elementary school mathematics. *10*:323–336, Nov. 1979.
Gullen, G. E. Set comparison tactics and strategies of children in kindergarten, first grade, and second grade. 9:349–360, Nov. 1978.

Hamrick, K. B. Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.
Harding, R. D., & Johnson, D. C. University level computing and mathematical problem-solving ability. *10*:37–55, Jan. 1979.
Hartz, M., & Brooks, S. Student placement—a comparison of traditional and computerized branching test administrations. *10*:213–216, May 1979.
Harvey, J. G. (Review) The gifted and the creative: A fifty-year perspective. *10*:73–78, Jan. 1979.
Harvey, J. G., Bright, G. W., & Wheeler, M. M. Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
Harvey, J. G., Wheeler, M. M., & Bright, G. W. Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.
Hendrickson, A. D. An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
Henry, L. L., & Easterday, K. E. The effect of maturation or education on sentential logic. 9:67–69, Jan. 1978.
Hiebert, J., & Tonnessen, L. H. Development of the fraction concept in two physical contexts: An exploratory investigation. 9:374–378, Nov. 1978.
Jacklin, C. N. (Review) Women in mathematics: Research perspectives for change. 9:387–390, Nov. 1978.
Jansson, L. C. A comparison of two approaches to the assessment of conditional reasoning abilities. 9:175–188, May 1978.
Jarman, R. F., & Sawada, D. Information matching within and between auditory and visual sense modalities and mathematics achievement. 9:126–136, Mar. 1978.
Johnson, D. C., & Harding, R. D. University level computing and mathematical problem-solving ability. *10*:37–55, Jan. 1979.
Juraschek, W. A. The interpretation of the connective *or* in disjunctive arguments. 9:62–66, Jan. 1978.
Kerr, D. R., & Lester, F. K. Some ideas about research methodologies in mathematics education. *10*:228–232, May 1979.
Kilpatrick, J., & Swafford, J. O. (Review) Guidelines for improving SAT scores. 9:384–387, Nov. 1978.
Kraft, R., Mitchell, R., Frankland, R. L., & Wheatley, G. H. Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
Kulm, G., & Days, H. Information transfer in solving problems. *10*:94–102, Mar. 1979.
Kulm, G., Wheatley, G. H., & Days, H. C. Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
Lester, F. K., & Kerr, D. R. Some ideas about research methodologies in mathematics education. *10*:228–232, May 1979.
McCornack, R. L., McLeod, D. B., Carpenter, T. P., & Skvarcius, R. Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
McLeod, D. B. (Review) Aptitudes and instructional methods: A handbook for research on interactions. 9:390–395, Nov. 1978.
McLeod, D. B., & Adams, V. The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
McLeod, D. B., Carpenter, T. P., McCornack, R. L., & Skvarcius, R. Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Meyer, R. A. Mathematical problem-solving performance and intellectual abilities of fourth-grade children. 9:334–348, Nov. 1978.
Mitchell, R., Kraft, R., Frankland, R. L., & Wheatley, G. H. Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
Moyer, J. C. The relationship between the mathematical structure of Euclidean transformations and the spontaneously developed cognitive structures of young children. 9:83–92, Mar. 1978.
Nelson, D., & Bana, J. Distractors in nonverbal mathematical problems. 9:55–61, Jan. 1978.
Petrosko, J. M. The quality of standardized high school mathematics tests. 9:137–148, Mar. 1978.
Price, G. G., & Carpenter, T. P. (Review) On further examination: Report of the Advisory Panel on the Scholastic Aptitude Test score decline. 9:155–160, Mar. 1978.
Prigge, G. R. The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.
Radatz, H. Error analysis in mathematics education. *10*:163–172, May 1979.
Radatz, H. Some aspects of individual differences in mathematics instruction. *10*:359–363, Nov. 1979.
Rathmell, E. A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" *10*:374–377, Nov. 1979.
Rising, G. R. How pure should we be? 9:379–383, Nov. 1978.
Sachar, J. An instrument for evaluating mental arithmetic skills. 9:233–237, May 1978.
Salhab, M., & Eastman, P. M. The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
Sawada, D., & Jarman, R. F. Information matching within and between auditory and visual sense modalities and mathematics achievement. 9:126–136, Mar. 1978.
Schoenfeld, A. H. Explicit heuristic training as a variable in problem-solving performance. *10*:173–187, May 1979.
Shann, M. H. Children's discrimination between enjoyment and value of arithmetic. *10*:153–158, Mar. 1979.
Shar, A. O., & Geeslin, W. E. An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
Sherman, J. A., & Fennema, E. H. Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Silver, E. A. Student perceptions of relatedness among mathematical verbal problems. *10*:195–210, May 1979.
Skvarcius, R., Carpenter, T. P., McLeod, D. B., & McCornack, R. L. Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Smith, L. R., & Edmonds, E. M. Teacher vagueness and pupil participation in mathematics learning. 9:228–232, May 1978.
Sprotzer, E. R., Brush, L. R., & Brett, L. J. Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Steffe, L. P. A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" *10*:370–374, Nov. 1979.
Suydam, M. N., & Weaver, J. F. Research on mathematics education reported in 1977. 9:242–318, July 1978.
Suydam, M. N., & Weaver, J. F. Research on mathematics education reported in 1978. *10*:241–320, inside backcover, July 1979.
Swafford, J. O., & Kilpatrick, J. (Review) Guidelines for improving SAT scores. 9:384–387, Nov. 1978.
Sztela, W. Hand-held calculators and the learning of trigonometric ratios. *10*:111–118, Mar. 1979.
Taloumis, T. Scores on Piagetian area tasks as predictors of achievement in mathematics over a four-year period. *10*:120–134, Mar. 1979.
Thornton, C. A. Emphasis on thinking strategies in basic fact instruction—a response. *10*:235–237, May 1979.
Thornton, C. A. Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
Threadgill, J. The interaction of learner aptitude with types of questions accompanying a written lesson on logical implications. *10*:337–346, Nov. 1979.
Threadgill, J. A. The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.
Tonnessen, L. H., & Hiebert, J. Development of the fraction concept in two physical contexts: An exploratory investigation. 9:374–378, Nov. 1978.
Vaughn, L. R., & Creswell, J. L. Hand-held calculator curriculum and mathematical achievement and retention. *10*:364–367, Nov. 1979.
Watkins, A. E. The symbols and grammatical structures of mathematical English and the reading comprehension of college students. *10*:216–218, May 1979.
Webb, N. L. Processes, conceptual knowledge, and mathematical problem-solving ability. *10*:83–93, Mar. 1979.
Wheatley, G. H., & Cifarelli, V. V. Critique of the Thornton study. *10*:233–234, May 1979.
Wheatley, G. H., & Cifarelli, V. V. Formal thinking strategies: A prerequisite for learning basic facts? *10*:368–370, Nov. 1979.

Wheatley, G. H., Frankland, R. L., Mitchell, R., & Kraft, R. Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
Wheatley, G. H., Kulm, G., & Days, H. C. Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
Wheeler, M. M., Bright, G. W., & Harvey, J. G. Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
Wheeler, M. M., Bright, G. W., & Harvey, J. G. Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.
Young, C. D., Jr., & Becker, J. P. The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
Young, C. D., Jr., & Becker, J. P. Designing instructional methods in mathematics to accommodate different patterns of aptitude. 9:4–19, Jan. 1978.

Subject Index

ACHIEVEMENT

Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
Hand-held calculator curriculum and mathematical achievement and retention. *10*:364–367, Nov. 1979.
Information matching within and between auditory and visual sense modalities and mathematics achievement. 9:126–136, Mar. 1978.
An instrument for evaluating mental arithmetic skills. 9:233–237, May 1978.
Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
Scores on Piagetian area tasks as predictors of achievement in mathematics over a four-year period. *10*:120–134, Mar. 1979.
Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.

ADDITION/SUBTRACTION

Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.
Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.

ALGEBRA

Hand-held calculators and the learning of trigonometric ratios. *10*:111–118, Mar. 1979.
Intellectual development and reversibility of thought in equation solving. 9:204–213, May 1978.
The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.

APTITUDE AND ABILITY

A comparison of two approaches to the assessment of conditional reasoning abilities. 9:175–188, May 1978.
Designing instructional methods in mathematics to accommodate different patterns of aptitude. 9:4–19, Jan. 1978.
The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
The interaction of learner aptitude with types of questions accompanying a written lesson on logical implications. *10*:337–346, Nov. 1979.
The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
Mathematical problem-solving performance and intellectual abilities of fourth-grade children. 9:334–348, Nov. 1978.
Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
Processes, conceptual knowledge, and mathematical problem-solving ability. *10*:83–93, Mar. 1979.
Student perceptions of relatedness among mathematical verbal problems. *10*:195–210, May 1979.

ATTITUDE

Children's discrimination between enjoyment and value of arithmetic. *10*:153–158, Mar. 1979.
Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.

CALCULATORS AND COMPUTERS

Hand-held calculator curriculum and mathematical achievement and retention. *10*:364–367, Nov. 1979.
Hand-held calculators and the learning of trigonometric ratios. *10*:111–118, Mar. 1979.
University level computing and mathematical problem-solving ability. *10*:37–55, Jan. 1979.

COGNITIVE STYLE

Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.
Some aspects of individual differences in mathematics instruction. *10*:359–363, Nov. 1979.

COLLEGE MATHEMATICS

High school calculus and first-quarter college calculus grades. *10*:69–72, Jan. 1979.
Student placement—a comparison of traditional and computerized branching test administrations. *10*:213–216, May 1979.
University level computing and mathematical problem-solving ability. *10*:37–55, Jan. 1979.

CONCEPT FORMATION

Development of the fraction concept in two physical contexts: An exploratory investigation. 9:374–378, Nov. 1978.
The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.

CONSERVATION

The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
Scores on Piagetian area tasks as predictors of achievement in mathematics over a four-year period. *10*:120–134, Mar. 1979.

COUNTING

A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 2) *10*:374–377, Nov. 1979.

DRILL

Critique of the Thornton study. *10*:233–234, May 1979.
Emphasis on thinking strategies in basic fact instruction—a response. *10*:235–237, May 1979.
Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
Formal thinking strategies: A prerequisite for learning basic facts? *10*:368–370, Nov. 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 1) *10*:370–374, Nov. 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 2) *10*:374–377, Nov. 1979.
Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.

ELEMENTARY SCHOOL MATHEMATICS

Artistic motion cues, number of pictures, and first-grade children's interpretation of mathematics textbook pictures. *10*:148–153, Mar. 1979.
A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.
Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
An instrument for evaluating mental arithmetic skills. 9:233–237, May 1978.
The relationship between the mathematical structure of Euclidean transformations and the spontaneously developed cognitive structures of young children. 9:83–92, Mar. 1978.
Research on mathematics education reported in 1977. 9:242–318, July 1978.
Set comparison tactics and strategies of children in kindergarten, first grade, and second grade. 9:349–360, Nov. 1978.
Textbook pictures and first-grade children's perception of mathematical relationships. 9:368–374, Nov. 1978.
Variables affecting word problem difficulty in elementary school mathematics. *10*:323–336, Nov. 1979.

ERROR PATTERNS

Error analysis in mathematics education. *10*:163–172, May 1979.

FRACTIONS

Development of the fraction concept in two physical contexts: An exploratory investigation. 9:374–378, Nov. 1978.

GAMES

Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.

GEOMETRY

An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.
Th interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
The relationship between the mathematical structure of Euclidean transformations and the spontaneously developed cognitive structures of young children. 9:83–92, Mar. 1978.
Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.

INDIVIDUAL DIFFERENCES

The gifted and the creative: A fifty-year perspective. *10*:73–78, Jan. 1979.
The interaction of field dependence/independence and the level of guidance of mathematics education. *10*:347–355, Nov. 1979.
Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.
Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Some aspects of individual differences in mathematics instruction. *10*:359–363, Nov. 1979.

INSTRUCTION

The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.
Emphasis on thinking strategies in basic fact instruction—a response. *10*:235–237, May 1979.
Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
Explicit heuristic training as a variable in problem-solving performance. *10*:173–187, May 1979.
Formal thinking strategies: A prerequisite for learning basic facts? *10*:368–370, Nov. 1979.
Hand-held calculators and the learning of trigonometric ratios. *10*:111–118, Mar. 1979.
Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.

The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 1) *10*:370–374, Nov. 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 2) *10*:374–377, Nov. 1979.
Some aspects of individual differences in mathematics instruction. *10*:359–363, Nov. 1979.
Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.

INTERACTION

Aptitudes and instructional methods: A handbook for research on interactions. 9:390–395, Nov. 1978.
Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Designing instructional methods in mathematics to accommodate different patterns of aptitude. 9:4–19, Jan. 1978.
The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
The interaction of learner aptitude with types of questions accompanying a written lesson on logical implications. *10*:337–346, Nov. 1979.
The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.

LANGUAGE

Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.
The symbols and grammatical structures of mathematical English and the reading comprehension of college students. *10*:216–218, May 1979.

LEARNING

Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
Formal thinking strategies: A prerequisite for learning basic facts? *10*:368–370, Nov. 1979.
Hand-held calculators and the learning of trigonometric ratios. *10*:111–118, Mar. 1979.
Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
Information matching within and between auditory and visual sense modalities and mathematics achievement. 9:126–136, Mar. 1978.
Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.
Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.
Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
The relationship between the mathematical structure of Euclidean transformations and the spontaneously developed cognitive structures of young children. 9:83–92, Mar. 1978.
The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 1) *10*:370–374, Nov. 1979.
A reply to "Formal thinking strategies: A prerequisite for learning basic facts?" (Response No. 2) *10*:374–377, Nov. 1979.
Set comparison tactics and strategies of children in kindergarten, first grade, and second grade. 9:349–360, Nov. 1978.
Teacher vagueness and pupil participation in mathematics learning. 9:228–232, May 1978.

LOGIC

A comparison of two approaches to the assessment of conditional reasoning abilities. 9:175–188, May 1978.
The effect of maturation or education on sentential logic. 9:67–69, Jan. 1978.
The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
The interaction of learner aptitude with types of questions accompanying a written lesson on logical implications. *10*:337–346, Nov. 1979.
The interpretation of the connective *or* in disjunctive arguments. 9:62–66, Jan. 1978.

MANIPULATIVE MATERIALS

Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.
Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
The manipulative materials strategy: The latest Pied Piper? 9:78–80, Jan. 1978.
The use of manipulative materials and student performance in the enactive and iconic modes. 9:94–102, Mar. 1978.

MEASUREMENT

Scores on Piagetian area tasks as predictors of achievement in mathematics over a four-year period. *10*:120–134, Mar. 1979.

MODELS (RESEARCH)

An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.

MULTIPLICATION/DIVISION

Emphasizing thinking strategies in basic fact instruction. 9:214–227, May 1978.
Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.

NUMBER CONCEPTS AND SYSTEMS

Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Cognitive style and mathematics learning: The interaction of field independence and instructional treatment in numeration systems. 9:163–174, May 1978.
A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.

PERCEPTION

An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
Artistic motion cues, number of pictures, and first-grade children's interpretation of mathematics textbook pictures. *10*:148–153, Mar. 1979.
The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
Information matching within and between auditory and visual sense modalities and mathematics achievement. 9:126–136, Mar. 1978.
Student perceptions of relatedness among mathematical verbal problems. *10*:195–210, May 1979.
Textbook pictures and first-grade children's perception of mathematical relationships. 9:368–374, Nov. 1978.

PIAGETIAN RESEARCH

An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
Development of the fraction concept in two physical contexts: An exploratory investigation. 9:374–378, Nov. 1978.
The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
Intellectual development and reversibility of thought in equation solving. 9:204–213, May 1978.
Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.
Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
The relationship between the mathematical structure of Euclidean transformations and the spontaneously developed cognitive structures of young children. 9:83–92, Mar. 1978.
Scores on Piagetian area tasks as predictors of achievement in mathematics over a four-year period. *10*:120–134, Mar. 1979.
Set comparison tactics and strategies of children in kindergarten, first grade, and second grade. 9:349–360, Nov. 1978.

PREDICTION

An alternative model describing children's spatial preferences. *10*:57–68, Jan. 1979.
High school calculus and first-quarter college calculus grades. *10*:69–72, Jan. 1979.
Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
Scores on Piagetian area tasks as predictors of achievement in mathematics over a four-year period. *10*:120–134, Mar. 1979.

PRESCHOOL MATHEMATICS

Children's difficulties on quantitative tasks: Are they simply a misunderstanding of relational terms? 9:149–151, Mar. 1978.
A comparison of three methods of introducing two-digit numeration. 9:33–43, Jan. 1978.
The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
An inventory of mathematical thinking done by incoming first-grade children. *10*:7–23, Jan. 1979.
Preschool children's knowledge of addition and subtraction. 9:44–54, Jan. 1978.

PROBLEM SOLVING

Distractors in nonverbal mathematical problems. 9:55–61, Jan. 1978.
Explicit heuristic training as a variable in problem-solving performance. *10*:173–187, May 1979.
Information transfer in solving problems. *10*:94–102, Mar. 1979.
Mathematical problem-solving performance and intellectual abilities of fourth-grade children. 9:334–348, Nov. 1978.
On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
Problem structure, cognitive level, and problem-solving performance. *10*:135–146, Mar. 1979.
Processes, conceptual knowledge, and mathematical problem-solving ability. *10*:83–93, Mar. 1979.
Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Student perceptions of relatedness among mathematical verbal problems. *10*:195–210, May 1979.
University level computing and mathematical problem-solving ability. *10*:37–55, Jan. 1979.
Variables affecting word problem difficulty in elementary school mathematics. *10*:323–336, Nov. 1979.

READINESS

Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.

READING

Distractors in nonverbal mathematical problems. 9:55–61, Jan. 1978.
The interaction of learner aptitude with types of questions accompanying a written lesson on logical implications. *10*:337–346, Nov. 1979.
The symbols and grammatical structures of mathematical English and the reading comprehension of college students. *10*:216–218, May 1979.

RESEARCH METHODOLOGY

Criteria for judging research reports and proposals. 9:75–78, Jan. 1978.
How pure should we be? 9:379–383, Nov. 1978.
Some ideas about research methodologies in mathematics education. *10*:228–232, May 1979.

RESEARCH REVIEWS

Aptitudes and instructional methods: A handbook for research on interactions. 9:390–395, Nov. 1978.
A brief look at NSF's Research in Science Education program. *10*:223–228, May 1979.
Critique of the Thornton study. *10*:233–234, May 1979.
Emphasis on thinking strategies in basic fact instruction—a response. *10*:235–237, May 1979.
The gifted and the creative: A fifty-year perspective. *10*:73–78, Jan. 1979.
Hemispheric specialization and cognitive development: Implications for mathematics education. 9:20–32, Jan. 1978.
The manipulative materials strategy: The latest Pied Piper? 9:78–80, Jan. 1978.

On further examination: Report of the Advisory Panel on the Scholastic Aptitude Test score decline. 9:155–160, Mar. 1978.
Research on mathematics education reported in 1977. 9:242–318, July 1978.
Women in mathematics: Research perspectives for change. 9:387–390, Nov. 1978.

SECONDARY SCHOOL MATHEMATICS

High school calculus and first-quarter college calculus grades. *10*:69–72, Jan. 1979.
The interaction of cognitive aptitudes with sequences of figural and symbolic treatments of mathematical inequalities. *10*:24–36, Jan. 1979.
The interaction of spatial visualization and general reasoning abilities with instructional treatment on absolute value equations. 9:152–154, Mar. 1978.
The quality of standardized high school mathematics tests. 9:137–148, Mar. 1978.
Research on mathematics education reported in 1977. 9:242–318, July 1978.

STUDENT CHARACTERISTICS

Processes, conceptual knowledge, and mathematical problem-solving ability. *10*:83–93, Mar. 1979.
Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Teacher vagueness and pupil participation in mathematics learning. 9:228–232, May 1978.

SYMBOLS

Oral language and readiness for the written symbolization of addition and subtraction. *10*:188–194, May 1979.
The symbols and grammatical structures of mathematical English and the reading comprehension of college students. *10*:216–218, May 1979.

TEACHER CHARACTERISTICS

Teacher vagueness and pupil participation in mathematics learning. 9:228–232, May 1978.

TEACHER EDUCATION

Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
Further study of the use of manipulatives with prospective teachers. *10*:211–213, May 1979.
The use of manipulative materials and student performance in the enactive and iconic modes. 9:94–102, Mar. 1978.

TEACHING METHODS

Comparison of lecture and laboratory strategies in a mathematics course for prospective elementary teachers. 9:103–117, Mar. 1978.
Designing instructional methods in mathematics to accommodate different patterns of aptitude. 9:4–19, Jan. 1978.
The differential effects of the use of manipulative aids on the learning of geometric concepts by elementary school children. 9:361–367, Nov. 1978.
Incorporating instructional objectives into the rules for playing a game. *10*:356–359, Nov. 1979.
The interaction of field dependence/independence and the level of guidance of mathematics instruction. *10*:347–355, Nov. 1979.
On narrowing the performance gap in mathematical thinking between advantaged and disadvantaged children. 9:323–333, Nov. 1978.
The relationship of field-independent/dependent cognitive style and two methods of instruction in mathematics learning. *10*:219–222, May 1979.
Using games to retrain skills with basic multiplication facts. *10*:103–110, Mar. 1979.

TESTS

Guidelines for improving SAT scores. 9:384–387, Nov. 1978.
An instrument for evaluating mental arithmetic skills. 9:233–237, May 1978.
Mathematical problem-solving performance and intellectual abilities of fourth-grade children. 9:334–348, Nov. 1978.
On further examination: Report of the Advisory Panel on the Scholastic Aptitude Test score decline. 9:155–160, Mar. 1978.
Pretraining Chicano students before administration of a mathematics predictor test. 9:118–125, Mar. 1978.
The quality of standardized high school mathematics tests. 9:137–148, Mar. 1978.
Student placement—a comparison of traditional and computerized branching test administrations. *10*:213–216, May 1979.

TEXTBOOKS

Artistic motion cues, number of pictures, and first-grade children's interpretation of mathematics textbook pictures. *10*:148–153, Mar. 1979.
The interaction of learner aptitude with types of questions accompanying a written lesson on logical implications. *10*:337–346, Nov. 1979.
The symbols and grammatical structures of mathematical English and the reading comprehension of college students. *10*:216–218, May 1979.
Textbook pictures and first-grade children's perception of mathematical relationships. 9:368–374, Nov. 1978.

TRANSFER OF TRAINING

The effects of perceptual transformation experiences and numerical operational experiences on numerical correspondence and equivalence. 9:69–74, Jan. 1978.
Explicit heuristic training as a variable in problem-solving performance. *10*:173–187, May 1979.

WOMEN AND MATHEMATICS

Sex-related differences in mathematics achievement and related factors: A further study. 9:189–203, May 1978.
Women in mathematics: Research perspectives for change. 9:387–390, Nov. 1978.